WHAT IS CLAIMED IS:

1. A method of manufacturing an optical element, comprising the steps of:

providing a molding material onto a mold;

giving a local temperature difference to an interface between the mold and the molding material to separate the mold and the molding material from each other in an area; and

successively enlarging the area of separation made by the temperature difference to entirely separate the mold and the molding material from each other.

2. The method of manufacturing an optical element according to claim 1, further comprising, after the provision of the molding material onto the mold and before the separation of the molding material from the mold, the step of putting a substrate on the molding material, wherein the local temperature difference is given from a side of the substrate opposite to a side facing the mold.

3. The method of manufacturing an optical element according to claim 2, wherein the local temperature difference is given via an intervening member having a thermal expansion coefficient higher than that of the substrate.

4. The method of manufacturing an optical element according to claim 3, wherein the intervening member has a thermal conductivity lower than that of the substrate.

5. The method of manufacturing an optical element according to claim 3, wherein the intervening member comprises a plurality of plate-like members superposed with a thermal insulation layer therebetween.

6. The method of manufacturing an optical element according to claim 1, wherein the local temperature difference is given by use of a cooling means or heating means.

7. The method of manufacturing an optical element according to claim 1, wherein the local temperature difference is given by use of a cooling means and the area of separation is enlarged by successively moving the cooling means.

8. The method of manufacturing an optical element according to claim 1, wherein the local temperature difference is given by use of a plurality of cooling means arranged at a peripheral portion of an optical element to be manufactured and the area of separation is enlarged by successively moving the plurality of

cooling means to a center portion of the optical element.

9. A method of manufacturing an optical element having in a surface thereof a fine pattern with a concave lens effect, comprising the steps of:

providing a molding material onto a mold having in a surface thereof a configuration corresponding to the fine pattern;

putting a substrate on the molding material;

giving a local temperature difference to an interface between the mold and the molding material at a peripheral portion of an optical element to be manufactured, to separate the mold and the molding material from each other in an area;

enlarging the area of separation made by the temperature difference successively from the peripheral portion to a center portion of the optical element such that the substrate warps convexly relative to the mold and only the center portion remains unseparated with the peripheral portion being separated;

bringing an ejector pin projecting from the mold side into contact with a peripheral portion of the substrate; and

heating an interface between the mold and the molding material at the center portion of the optical element to entirely separate the mold and the molding

material from each other.

10. An optical element manufactured by the method as set forth in any one of claims 1 to 9.

11. The optical element according to claim 10, comprising a plurality of optical members each having a diffraction grating, as superposed.

12. An optical system comprising a plurality of optical elements including the optical element as set forth in claim 10.

13. An optical device for forming an image using the optical system as set forth in claim 12.

14. The optical device according to claim 13, which is an imaging device.

15. The optical device according to claim 13, which is an observing device.